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10/528,800	03/31/2006	Christopher C. Broder	044508-5023	9160

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EXAMINER

BLUMEL, BENJAMIN P

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1648

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Applicants are informed that the rejections of the previous Office action not stated below have been withdrawn from consideration in view of the Applicant's arguments and/or amendments.

Claims 16, 17, 19, 23, 24, 26, 31-40 and 42-46 are examined on the merits.

Response to Arguments

Applicant's arguments filed March 5, 2009 have been fully considered but they are not persuasive. See responses below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

(Prior Rejection Maintained) Claims 31-33, 36-40, 42, 43, 45 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Compans and Ranjit (US Pat. 5,843,451), Lambert et al. (PNAS, 1996), Young et al. (Virology, 1997), Williamson et al. (Journal of Comparative Pathology, 1999) and Harcourt et al. (Virology, 2000).

(Prior Rejection Maintained) Claims 31-33, 36-40 and 42-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Compans and Ranjit (*supra*), Young et al. (*supra*), Williamson et al. (*supra*), Harcourt et al. (*supra*) and Bembridge et al. (Journal of General Virology, 2000).

Response to arguments:

Applicants argue that many differences exist between the F protein of Hendra and Nipah viruses and that of other paramyxoviruses. For example, the F protein of these viruses is significantly different than other viruses of the paramyxo-family based on amino acid homology and the wider target cell tropism of the Nipah or Hendra virus. Nipah and Hendra viruses are also BSL-4 pathogens. Therefore, one skilled in the art would not be motivated by Compans/Ranjit and Lambert et al. or any of the other cited references to use any F protein that includes SEQ ID NO: 1 and/or 2 to inhibit viral fusion with a target cell. Applicants also argue that the claimed invention is believed to be obvious based on improper hindsight reasoning.

In response to applicants' argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In addition, even though differences do exist between the F proteins within the *Paramyxoviridae* family, these differences would only lead one skilled in the art to not use a recombinant Hendra or Nipah F protein to inhibit viral fusion between a cell and non-Hendra/Nipah paramyxoviruses. Furthermore, given the higher pathogenicity/cellular tropism of Nipah and Hendra viruses, one skilled in the art would be further motivated to use the teachings of Compans/Ranjit and Lambert et al. which

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establish how similar F proteins can be used to block viral infection. Particularly since no vaccine or successful treatment regimen is available for Nipah and Hendra viruses.

It is also argued Young et al. do not teach SEQ ID NO: 1 and 2, but rather a smaller F protein from Newcastle Disease virus (NDV).

In response, the claimed invention requires that any protein be employed that contains SEQ ID NO:s 1 or 2. Furthermore, Young et al. is merely cited to establish that a small F protein fragment from NDV can be created in order inhibit cell fusion with virus.

It is also argued that none of the cited references teach the inhibition of Hendra or Nipah viral fusion to target cells.

In response, given the teachings of Compans/Ranjit and Lambert et al., one skilled in the art would possess an established method of administering paramyxovirus fusion proteins to inhibit viral fusion. Furthermore, with the importance of Nipah and Hendra viral infections due to their high mortality rates, and the establishment of a F protein comprising SEQ ID NO:s 1 and 2 as taught by Harcourt et al., one skilled in the art would adapt the teachings of Lambert and Compans/Ranjit to inhibit the viral targeting of Nipah or Hendra.

Therefore, the rejections are maintained for reasons of record.

Claim Objections

Claims 34 and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Claims 16, 17, 19, 23, 24 and 26 are free of the art. Claims 31-40 and 42-46 are not allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BENJAMIN P. BLUMEL whose telephone number is (571)272-4960. The examiner can normally be reached on M-F, 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Nickol can be reached on 571-272-1600. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stacy B Chen/
Primary Examiner, Art Unit 1648

/BENJAMIN P BLUMEL/
Examiner
Art Unit 1648